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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/806,961	07/30/2001	Hubert Schenkel	H 3475 PCT/U	2258

423 7590 05/21/2003

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EXAMINER

SELLERS, ROBERT E

ART UNIT PAPER NUMBER

1712

DATE MAILED: 05/21/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/806,961

Applicant(s)

SCHENKEL, HUBERT

Examiner

Robert Sellers

Art Unit

1712

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 April 2001 and 25 April 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 15-43 is/are pending in the application.
- 4a) Of the above claim(s) 18-20, 23-33 and 35-43 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 15-17, 21, 22 and 34 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

The election of a carboxy-terminated butadiene/acrylonitrile copolymer (specification, page 6, lines 16-20) as the epoxy-reactive groups-containing copolymer (a) and the phenolic groups-terminated product (b) derived from the reaction of an anhydride and amino-terminated polyalkylene glycol further reacted with a polyphenol (page 15, lines 14-21) have been elected. Accordingly, the election of species portion of the restriction requirement mailed March 18, 2003 (Paper No. 8) has been completed in a telephone conversation with Gregory M. Hill on May 5, 2003.

The election with traverse of Group I in Paper No. 9 is acknowledged. The traversal is on the grounds that the special technical feature of an adhesive with low temperature flexibility and peel strength is the common denominator for all of the claimed compositions.

This is not found persuasive because the low temperature flexibility and peel strength allegedly not provided by the prior art discussed on page 1, line 10 to page 5, line 5 of the specification accrues from the presence of the phenolic or amino groups-terminated product (b) which is not mentioned in the prior art descriptions. However, the product has been previously employed in Schmid et al. and European Patent Nos. 258,556 and 309,190 as explained on page 5, the second paragraph of the restriction requirement.

PCT Rule 13.2 requires "technical features that define a contribution which each of the claimed inventions, considered as a whole, makes over the prior art." The technical feature embodied in the claimed phenolic or amino groups-terminated product (b) does not make a contribution over the prior art, thereby validating a holding of lack of unity.

The requirement is still deemed proper and is therefore made FINAL.

Claims 20, 23-33 and 35-43 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to non-elected species, there being no allowable generic or linking claim. Applicant timely traversed the restriction requirement in Paper No. 9. Claims 18 and 19 are withdrawn as being directed to a non-elected species of epoxy-reactive groups-containing copolymer (a).

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 15-17, 21, 22 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mulhaupt et al. Patent No. 5,073,601.

Mulhaupt et al. (col. 1, line 55 to col. 2, line 16) discloses a composition comprising liquid copolymer A) which is most preferably a carboxyl groups-containing acrylonitrile/butadiene copolymer of the Hycar type (col. 3, lines 3-6), a segmented polyamide as the compound of formula I B) containing phenolic or amino end groups via reaction of an amino-terminated polyamide with a hydroxybenzoic acid or an aminocarboxylic acid (col. 8, lines 3-14), and an epoxy resin (col. 9, lines 26-29).

The claimed terminal phenolic or amino groups-terminated product (b) obtained from a reaction of excess (di)anhydride and polyamine further reacted with a polyphenol or aminophenol is product-by-process language. "If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process (*In re Thorpe*, 227 USPQ 964, 966, Federal Circuit 1985 and MPEP § 2113, the "Product-by-Process Claims' section)." "Once the examiner provides a rationale tending to show that the claimed product appears to be the same or similar to that of the prior art, although produced by a different process, the burden shifts to applicant to come forward with evidence establishing an unobvious difference between the claimed product and the prior art product (*In re Marosi*, 218 USPQ 289, 292, Federal Circuit 1983 and MPEP § 2113, the section entitled 'Once a Product Appearing to be Substantially Identical is Found and a 35 U.S.C. 102/103 Rejection Made, the Burden Shifts to the Applicant to Show an Unobvious Difference')." "

The phenolic or amino-terminated polyamide of Mulhaupt et al. is equivalent to that claimed due to equivalent polyamide backbones modified to introduce phenolic or amino end groups. The mechanism of attaching the end groups via the formation of amide linking moieties in Mulhaupt et al. does not result in a product outside of the claims which merely denotes a terminal phenolic or amino groups-bearing product (b).

Claims 15-17, 21, 22 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kiyohara et al. in view of Mulhaupt et al. Patent No. 5,073,601.

Kiyohara et al. sets forth a formulation prepared from a phenolic hydroxyl groups-containing polyamide (col. 8, lines 3-6) derived from excess phenolic hydroxyl group-bearing aromatic dicarboxylic acid (col. 2, lines 27-47 and col. 4, lines 53-56) and a diamine, an epoxy resin (col. 7, lines 51-58) and nitrile or butadiene rubbers (col. 12, line 31). The prior art phenolic groups-containing polyamide conforms to the claimed terminal phenolic or amino groups-terminated product (b) defined by product-by-process terminology for the same reasons as espoused hereinabove with respect to Mulhaupt et al.

The claimed epoxy-reactive groups-containing copolymer (a) including a carboxy-terminated butadiene/acrylonitrile copolymer is not recited. Mulhaupt et al. recites the blending of a carboxyl groups-containing acrylonitrile/butadiene copolymer with a phenolic end groups-containing polyamide wherein the combination of impact strength modifiers imparts increased peel strength, reduced crack propagation (col. 1, lines 36-40).


It would have been obvious to employ a carboxy-functional butadiene/acrylonitrile copolymer of Mulhaupt et al. as the nitrile or butadiene rubber of Kiyohara et al. in order to chemically incorporate the rubber into the composition via reaction of the carboxy groups with the epoxy groups of the epoxy resin, and to increase the peel strength and reduce the crack propogation.

More favorable consideration would be given regarding both Mulhaupt et al. and Kiyohara et al. to the limitation of the product as "(b) a phenolic or amino groups-terminated reaction product of an anhydride or carboxyl groups-containing (anhydride or dianhydride)/(diamine or polyamine) condensate wherein the terminal phenolic or amino groups are provided by reaction with at least one polyphenol or aminophenol."

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The remainder of the cited prior art pertains to mixtures of epoxy resins and phenolic-terminated polyamides without the claimed epoxy-reactive groups-containing copolymer (a).

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